

Message Text

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ORIGIN OES-07

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TO AMEMBASSY BUENOS AIRES PRIORITY

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TAGS: XV, AR, PARM, ENGR, MNVC, TECH

SUBJECT: ANTARCTICA: OPERATION AND REMOVAL OF U.S.
NUCLEAR POWER REACTOR AT MCMURDO
REFERENCE: BUENOS AIRES 2765

1. IN RESPONSE TO ARGENTINE PRESS INQUIRIES, THE EMBASSY
SHOULD DRAW ON THE INFORMATION GIVEN BELOW ON THE FORMER
U.S. NUCLEAR POWER REACTOR AT THE U.S. MCMURDO STATION IN
ANTARCTICA.

2. THE POWER PLANT, DESIGNATED PM-3A, ARRIVED AT MCMURDO
BY SHIP ON DECEMBER 12, 1961. IT FIRST PROVIDED ELECTRIC
POWER ON JULY 10, 1962, AND WAS OPERATED UNTIL SEPTEMBER,
1972. IN THAT MONTH, SHIELD WATER LEAKAGE INTO THE STEAM
GENERATOR TANK WAS DISCOVERED DURING A ROUTINE INSPECTION.
IN JANUARY, 1973, IT WAS DETERMINED THAT THE REACTOR
PRESSURE VESSEL AND PRIMARY COOLANT PIPING HAD BECOME WET.
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IT WAS ALSO POSSIBLE THAT OTHER DAMAGE HAD BEEN DONE TO THE
PLANT. SINCE ITS INSTALLATION, THE NUCLEAR POWER PLANT
NEVER DISCHARGED RADIOACTIVE MATERIALS IN EXCESS OF AMOUNTS
SPECIFIED AS SAFE BY THE INTERNATIONAL ATOMIC ENERGY
AGENCY. THE HIGH COST OF A FULL INSPECTION, AND THE
UNKNOWN PROBABILITY OF SUCCESS OF SUCH AN INSPECTION, AND

THE LACK OF ANOTHER FEASIBLE COURSE OF ACTION RESULTED IN A DECISION TO END OPERATION OF THE PLANT AND REMOVE IT FROM ANTARCTICA TO THE U.S. DISMANTLING AND REMOVAL OF THE PLANT TOOK PLACE IN THE AUSTRAL SUMMER SEASONS OF 1973-74 AND 1974-75.

3. THE PLANT HAD BEEN OPERATED IN ACCORDANCE WITH STANDARDS OF THE U.S. NUCLEAR REGULATORY COMMISSION (FORMERLY THE ATOMIC ENERGY COMMISSION). DURING OPERATION, HARMLESS EFFLUENTS WERE DISCHARGED INTO AN AREA ADJACENT TO THE POWER PLANT. OVER THE YEARS, THE SOIL UNDER THE PLANT ABSORBED MINUTE QUANTITIES OF RADIONUCLIDES FROM THE EFFLUENT. THE SOIL POSED NO RADIATION HAZARD. FOR TRANSPORTATION PURPOSES, AS DEFINED BY THE INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA SAFETY SERIES NO. 6, 1973 REVISED EDITION, SECTION 1, PARAGRAPH 134), THIS MATERIAL WAS NOT EVEN RADIOACTIVE. THE AVERAGE CONCENTRATION OF RADIONUCLIDES IN THE MATERIAL WAS TEN TIMES LOWER THAN THE TRANSPORTATION DEFINITION FOR RADIOACTIVE MATERIALS. HOWEVER, IN ORDER TO BE IN STRICTEST COMPLIANCE WITH ARTICLE V, PARA 1 OF THE ANTARCTIC TREATY, WHICH PROHIBITS DISPOSAL OF NUCLEAR WASTE IN THE ANTARCTIC, THE U.S. DECIDED TO REMOVE THE SOIL AND BACKFILL AT THE POWER PLANT SITE TO THE U.S. THIS REMOVAL, OF ABOUT 6,500 CUBIC YARDS OF SOIL, OCCURRED DURING THE 1976-77 AND 1977-78 SEASONS. A FINAL SHIPMENT OF SOME 100 CUBIC

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YARDS WILL TAKE PLACE IN THE COMING AUSTRAL SUMMER. THE SOIL HAS BEEN SHIPPED TO THE CONTINENTAL UNITED STATES FOR APPROPRIATE DISPOSAL. THE PLANT SITE AT MCMURDO WILL BE GRADED TO CONFORM TO THE SURROUNDING TOPOGRAPHY.

4. EMBASSY MAY ALSO WISH TO CONSULT THE ARTICLE ON THE PLANT SHUT-DOWN IN THE JANUARY-FEBRUARY 1974 ISSUE OF THE ANTARCTIC JOURNAL, PUBLISHED BY THE NATIONAL SCIENCE FOUNDATION, WHICH WE UNDERSTAND IS RECEIVED BY THE EMBASSY. CHRISTOPHER

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